

ABSTRACT OF THE DISCLOSURE

An ablation apparatus capable of obtaining intensity distribution in a concave shape at an irradiation surface even when a laser beam goes through a small opening of an aperture to be formed into a small spot. In the apparatus, a laser light source emits the beam which effects ablation to the object, an irradiation optical system directs and irradiates the beam onto an irradiation surface of the object, an aperture in the system has an opening, a convex lens in the system once collects the beam passed through the opening and directs the beam onto the surface at a defocus position, and an aspherical optical element in the system makes intensity distribution of the beam after passing through the opening to be convex, wherein an aspherical shape of the element is curved where a radius of curvature at a local surface is reduced toward a periphery from an optical axis.